

Application Serial No.: 10/601,881  
Applicant(s): Long et al.

Docket No.: N.C. 84,353

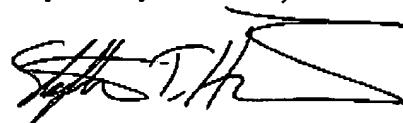
**Conclusion**

In conclusion, Applicants wish to again thank the Examiner and the Examiner's Supervisor for the courtesy of their time and comments. Applicants respectfully submit that the Examiner's Office Action has been fully responded to and that the claims are in condition for allowance. In the furtherance of compact prosecution, if a personal or telephone interview would help expedite matters, the Examiner is requested to contact Steve Hunnius at 202-404-1554.

Kindly charge any additional fees due, or credit overpayment of fees, to Deposit Account No. 50-0281.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



Stephen T. Hunnius  
Reg. No. 48,304  
Naval Research Laboratory  
Code 1008.2  
4555 Overlook Avenue, S.W.  
Washington, D.C. 20375-5325  
(202) 404-1554

# Polymer–nanoarchitecture hybrids

- Creating electrode structures in aerogel forms leads to vast improvements in electrochemical performance
  - Amplified electrode/electrolyte interface
  - Interconnected nanoscale particle network

## Charge-storage mechanisms:



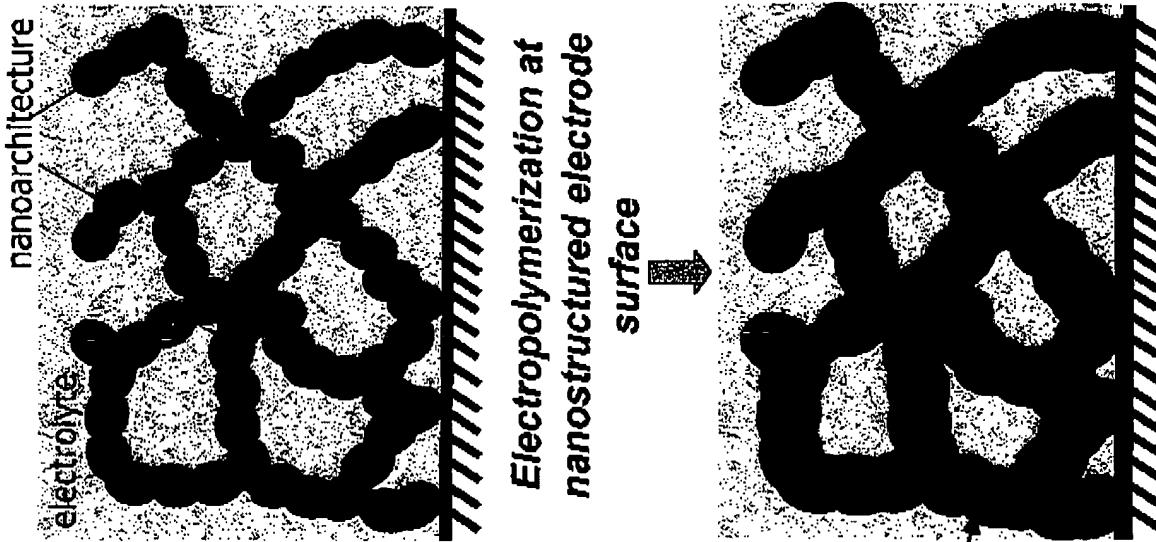
1. ion-insertion
2. double-layer capacitance

- ... but that's not the end of the story
- Extend the functionality and versatility of electrically conductive nanoarchitectures

electropolymerization

Ultrathin, conformal polymer coating applied on the surface of the nanostructured metal oxide

Conformal coating can retain porosity and surface area of underlying oxide



# Electrodeposition within nanoarchitectures

- Controlling electrodeposition within porous structure is problematic
  - Particularly for aperiodic, hierarchical pore structures

## Appendix B

